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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/820,205	04/06/2004	Daniel Scott Woodman	22090-3	7418

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EXAMINER

LUKS, JEREMY AUSTIN

ART UNIT	PAPER NUMBER
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2837

DATE MAILED: 05/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/820,205

Applicant(s)

WOODMAN ET AL.

Examiner

Jeremy Luks

Art Unit

2837

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 April 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152..

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>4/6/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

1. Claims 1-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Holtrop (4,476,183) in view of Juriga (5,536,556), further in view of Weber (4,940,629), and further in view of Haussling (4,828,910).

With respect to Claims 1, 10, 20, 22, 23, Holtrop discloses a porous fiber reinforced thermoplastic core layer (Figure 2, #13) comprising a thermoplastic material (Col. 3, Lines 36-37), said core layer (13) having a first surface and a second surface; a tie layer (16) covering said second surface of said core layer (13); a barrier layer (12) covering said tie layer (16), said tie layer (16) bonding said barrier layer (12) to said core layer (13) (Col. 3, Lines 50-55); and a fabric layer (21) comprising a non-woven fabric bonded (18) to said barrier layer (12) (Col. 5, Lines 3-10), said fabric layer (21)

Art Unit: 2837

forming an outer surface of a panel (10). Holtrop fails to disclose a thermoplastic core layer comprising a thermoplastic material and from about 20 weight percent to about 80 weight percent fibers, a density from about 0.2 gm/cc to about 1.8 gm/cc; a tie layer comprising a thermoplastic material; and a barrier layer comprising a thermoplastic material having a melting temperature higher than the melting temperature of said core layer thermoplastic material. Nevertheless, Weber discloses a thermoplastic core layer comprising a thermoplastic material and from about 20 weight percent to about 80 weight percent fibers, a density from about 0.2 gm/cc to about 1.8 gm/cc (Col. 1, Lines 44-49).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the apparatus of Holtrop with the structure of Weber to provide composite materials which are notable for low density, excellent heat insulation properties, an outer skin of high strength and high surface quality, high flexural strength, high energy absorption in relation to mechanical impact, reduced thermal expansion and cold flow tendency and a favorable flammability rating combined with simple manufacturing and processing properties.

Weber fails to disclose a tie layer comprising a thermoplastic material, and a barrier layer comprising a thermoplastic material having a melting temperature higher than the melting temperature of said core layer thermoplastic material. However, Juriga discloses a tie layer (Figure 2, #42) comprising a thermoplastic material (Col. 6, Lines 27-35).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the structures of Holtrop and Weber with the materials of Juriga to provide a thermosetting adhesive to the structure that will bond and harden after being heat molded to secure the various layers in the molded absorber to one another, and be able to withstand heat distortion or deterioration.

Juriga fails to disclose a barrier layer comprising a thermoplastic material having a melting temperature higher than the melting temperature of said core layer thermoplastic material. Nevertheless, Haussling discloses a barrier layer (Figure 1, #2) comprising a thermoplastic material having a melting temperature higher than the melting temperature of said core layer (3) thermoplastic material (Col. 2, Lines 56-68; Col. 4, Lines 27-33).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the structures of Holtrop, Weber and Juriga with the materials of Haussling to compress the fibers of the core and bind the core to the barrier layer in one step of heat molding. The core fibers will melt and form a final shape and desired acoustical properties, while the barrier layer will bond to the core without changing its form.

With respect to Claims 2, 12 and 21, Holtrop discloses a decorative layer (Figure 2, #25) bonded to a first surface of a core layer (13).

With respect to Claims 3, 13 and 26, Juriga discloses decorative layer (Figure 4, #28) comprises a thermoplastic film (50) comprising at least one of polyvinyl chloride, a polyolefin, thermoplastic polyester, and a thermoplastic elastomer (Col. 8, Lines 10-25).

With respect to Claims 4-6, 8, 9, 14-16, 18, 19, 24, 25 and 27, Holtrop discloses decorative layer (Figure 2, #25) comprising a layered laminate comprising a foam core (14), an adhesive layer (19) between the core layer (13) and decorative layer (25) (Col. 5, Lines 50-53), and woven or non-woven fabric (22), said foam core (14) comprising at least one of polypropylene, polyethylene, polyvinyl chloride, and polyurethane (Col. 4, Lines 17-21 and 28-31), and non-woven fabric (22) comprising at least one of polyvinyl chloride, a polyolefin, thermoplastic polyester, and a thermoplastic elastomer (Col. 5, Lines 6-17). Holtrop fails to disclose a thermoplastic adhesive comprising at least one layer of thermoplastic adhesive material. However, Juriga discloses a thermoplastic adhesive comprising at least one layer of thermoplastic adhesive material (Col. 6, Lines 27-35).

With respect to Claims 7 and 17, Holtrop discloses decorative layer (Col. 6, Lines 55-58) comprising a layered laminate (Figure 3, #30) comprising a foam core (34), a non-woven batting (35), and woven or non-woven fabric (42), said foam core (34) comprising at least one of polypropylene, polyethylene, polyvinyl chloride, and polyurethane (Col. 4, Lines 17-21 and 28-31; Col. 6, Lines 3-10), said non-woven batting (35) comprising at least one polyester material and polyamide fibers (Col. 6, Lines 2-3).

With respect to Claim 11, Juriga discloses a tie layer (Figure 2, #42) having a low melting temperature (Col. 6, Lines 20-23) covering a second surface of a core layer (36), and said tie layer (42) bonding a barrier layer (38) to said core layer (36). Juriga fails to disclose a barrier layer having a melting temperature higher than that of the tie

layer. However, Haussling discloses a barrier layer (Figure 1, #2) having a higher melting point (Col. 6, Lines 27-31) than that of the tie layer described by Juriga.

Conclusion

2. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Pertinent arts of record relating to decorative interior sound absorbing panels are disclosed in the PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremy Luks whose telephone number is (571) 272-2707. The examiner can normally be reached on Monday-Thursday 8:30-6:00, and alternating Fridays 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula Bradley can be reached on (571) 272-2800 x33. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

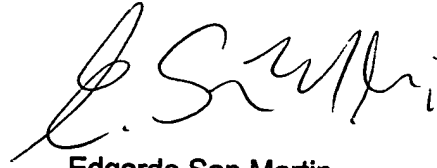
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Application/Control Number: 10/820,205
Art Unit: 2837

Page 7

Jeremy Luks
Patent Examiner

Art Unit 2837

A handwritten signature in black ink, appearing to read 'E. San Martin', written in a cursive style.

Edgardo San Martin
Primary Examiner